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<150> PCT/US00/28066

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<150> 60/159,542

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&lt;170&gt; PatentIn Ver. 2.0

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<212> DNA
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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<212> DNA

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<212> DNA

<213> Homo sapiens

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 35 40 45  
 Ala Leu Tyr Ala Met Lys Thr Leu Arg Lys Lys Asp Val Leu Asn Arg  
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 Asn Gln Val Ala His Val Lys Ala Glu Arg Asp Ile Leu Ala Glu Ala  
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 Asp Asn Glu Trp Val Val Lys Leu Tyr Tyr Ser Phe Gln Asp Lys Asp  
 85 90 95  
 Ser Leu Tyr Phe Val Met Asp Tyr Ile Pro Gly Lys Asp Met Met Ser  
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 Leu Leu Ile Arg Met Glu Val Phe Pro Glu His Leu Ala Arg Phe Tyr  
 115 120 125  
 Ile Ala Glu Leu Thr Leu Ala Ile Glu Ser Val His Lys Met Gly Phe

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Cys	Leu	Ala	His	Ser	Leu	Val	Gly	Thr	Pro	Asn	Tyr	Ile	Ala	Pro	Glu
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Val	Leu	Leu	Arg	Lys	Gly	Tyr	Thr	Gln	Leu	Cys	Asp	Trp	Trp	Ser	Val
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Gly	Val	Ile	Leu	Phe	Glu	Met	Leu	Val	Gly	Gln	Pro	Pro	Phe	Leu	Ala
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Pro	Thr	Pro	Thr	Glu	Thr	Gln	Leu	Lys	Val	Ile	Asn	Trp	Glu	Asn	Thr
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Ile	Thr	Lys	Leu	Cys	Cys	Ser	Ala	Asp	His	Arg	Leu	Gly	Arg	Asn	Gly
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Ala	Asp	Asp	Leu	Lys	Ala	His	Pro	Phe	Phe	Ser	Ala	Ile	Asp	Phe	Ser
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Gly	Ala	Glu	Ala	Ser	Gln	Ala	Glu	Ser	Ser	Asp	Leu	Glu	Ser	Ser	Asp
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Leu	Val	Asp	Gln	Thr	Glu	Gly	Cys	Gln	Pro	Val	Tyr	Val			
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Tyr	Val	Glu	Gly	Gly	Asp	Cys	Ala	Thr	Leu	Leu	Lys	Asn	Ile	Gly	Ala
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Leu	Pro	Val	Glu	Met	Ala	Arg	Met	Tyr	Phe	Ala	Glu	Thr	Val	Leu	Ala
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Leu	Glu	Tyr	Leu	His	Asn	Tyr	Gly	Ile	Val	His	Arg	Asp	Leu	Lys	Pro
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Asp	Asn	Leu	Leu	Ile	Thr	Ser	Met	Gly	His	Ile	Lys	Leu	Thr	Asp	Phe
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Gly	Leu	Ser	Lys	Met	Gly	Leu	Met	Ser	Leu	Thr	Thr	Asn	Leu	Tyr	Glu
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Gly	His	Ile	Glu	Lys	Asp	Ala	Arg	Glu	Phe	Leu	Asp	Lys	Gln	Val	Cys
		100						105					110		
Gly	Thr	Pro	Glu	Tyr	Ile	Ala	Pro	Glu	Val	Ile	Leu	Arg	Gln	Gly	Tyr
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	130					135					140				
Leu	Val	Gly	Cys	Val	Pro	Phe	Phe	Gly	Asp	Thr	Pro	Glu	Glu	Leu	Phe
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Gly	Gln	Val	Ile	Ser	Asp	Asp	Ile	Leu	Trp	Pro	Glu	Gly	Asp	Glu	Ala
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Thr	Arg	Ser	Asp	Arg	Tyr	His	His	Val	Asn	Ser	Tyr	Asp	Glu	Asp	Asp
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Pro Arg Phe Ser Lys Val Tyr Ser Ser Met Glu Gln Leu Ser Gln His  
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 Glu Pro Lys Thr Pro Val Ala Ala Ala Gly Ser Ser Lys Arg Glu Pro  
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 Ser Thr Lys Gly Pro Glu Lys Val Ala Gly Lys Arg Glu Gly Leu  
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 Ile Lys Arg Phe Ser Ala Ser Glu Ala Ser Phe Leu Glu Gly Glu Ala  
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 Ala Pro Lys Glu Glu Thr Gln Gly Glu Gly Thr Ser Ser Ala Gly Asp  
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 Ser Glu Ala Thr Asp Arg Pro Arg Pro Gly Asp Leu Cys Pro Pro Ser  
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 Lys Asp Gly Asp Ala Ser Gly Pro Arg Ala Thr Asn Asp Leu Val Leu  
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 Leu Ala Ser Pro Met Ser Pro Arg Ser Leu Ser Ser Asn Pro Ser Ser  
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 Arg Asp Ser Ser Pro Ser Arg Asp Tyr Ser Pro Ala Val Ser Gly Leu  
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 Leu Arg Ala Ile Arg Val Tyr Met Gly Asp Thr Asp Val Tyr Ser Val  
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 His His Ile Val Trp His Val Glu Glu Gly Pro Ala Gln Glu Ala  
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			675				680						685		
Pro	Gly	Ser	Pro	Thr	His	Gly	Leu	Pro	Ala	Arg	Ser	Pro	Thr	His	Ser
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Tyr	Arg	Ser	Thr	Pro	Asp	Ser	Ala	Tyr	Leu	Gly	Ala	Ser	Ser	Gln	Ser
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Ser	Ser	Pro	Ala	Ser	Ser	Thr	Pro	Asn	Ser	Pro	Ala	Ser	Ser	Ala	Ser
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His	His	Ile	Arg	Pro	Ser	Thr	Leu	His	Gly	Leu	Ser	Pro	Lys	Leu	His
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Arg	Gln	Tyr	Arg	Ser	Ala	Arg	Cys	Lys	Ser	Ala	Gly	Asn	Ile	Pro	Leu
			755				760						765		
Ser	Pro	Leu	Ala	His	Thr	Pro	Ser	Pro	Thr	Gln	Ala	Ser	Pro	Pro	Pro
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Leu	Pro	Gly	His	Thr	Val	Gly	Ser	Ser	His	Thr	Thr	Gln	Ser	Phe	Pro
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Ala	Lys	Leu	His	Ser	Ser	Pro	Pro	Val	Val	Arg	Pro	Arg	Pro	Lys	Ser
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Lys	Leu	Gly	Ala	Ser	Leu	Ser	Ala	Asp	Lys	Lys	Gly	Ala	Leu	Arg	Lys
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His	Ser	Leu	Glu	Val	Gly	His	Pro	Asp	Phe	Arg	Lys	Asp	Phe	His	Gly
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Glu	Leu	Ala	Leu	His	Ser	Leu	Ala	Glu	Ser	Asp	Gly	Glu	Thr	Pro	Pro
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Val	Glu	Gly	Leu	Gly	Ala	Pro	Arg	Gln	Val	Ala	Val	Arg	Arg	Leu	Gly

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Arg	Gln	Glu	Ser	Pro	Leu	Ser	Leu	Gly	Ala	Asp	Pro	Leu	Leu	Pro	Glu		
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Glu	Asp	Gly	Thr	Gly	Gly	Met	Ala	Arg	Ala	Val	Ala	Lys	Ala	Ala	Leu		
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Gln	Glu	Pro	Ala	Pro	Leu	Ala	Pro	Ser	Val	Pro	Glu	Ala	Pro	Arg	Gly		
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Glu	Gly	Gln	Leu	Asn	Glu	Ser	Met	Phe	Leu	Leu	Ser	Ser	Arg	Pro	Thr														
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Pro	Arg	Thr	Ser	Thr	Ala	Val	Glu	Val	Ser	Pro	Gly	Glu	Asp	Met	Thr														
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Thr	Asp	Ser	Asp	Leu	Val	Val	Thr	Pro	Ile	Ile	Asp	Asn	Pro	Lys	Ile														
245										250										255									
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Val	Ala	Gly	His	Gln	Glu	Val	Ala	Thr	Arg	Leu	Leu	His	Ser	Pro	Leu														
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Gln Leu Phe Ser  
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Glu Gly Val His Tyr Leu His Ser Asn Met Ile Val His Arg Asp Ile  
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Lys Gly Ala Asn Ile Leu Arg Asp Ser Thr Gly Asn Val Lys Leu Gly  
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Asp Phe Gly Ala Ser Lys Arg Leu Gln Thr Ile Cys Leu Ser Gly Thr  
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Gly Met Lys Ser Val Thr Gly Thr Pro Tyr Trp Met Ser Pro Glu Val  
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Ile Ser Gly Glu Gly Tyr Gly Arg Lys Ala Asp Ile Trp Ser Val Ala  
 100 105 110

Cys Thr Val Val Glu Met Leu Thr Glu Lys Pro Pro Trp Ala Glu Phe  
 115 120 125

Glu Ala Met Ala Ala Ile Phe Lys Ile Ala Thr Gln Pro Thr Asn Pro  
 130 135 140

Lys Leu Pro Pro His Val Ser Asp Tyr Thr Arg Asp Phe Leu Lys Arg  
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Ile Phe Val Glu Ala Lys Leu Arg Pro Ser Ala Asp Glu Leu Leu Arg  
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His Met Phe Val His Tyr His  
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Ser	Asp	Pro	Ser	Gly	His	Leu	Thr	Gly	Met	Val	Gly	Thr	Ala	Leu	Tyr
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Val	Ser	Pro	Glu	Val	Gln	Gly	Ser	Thr	Lys	Ser	Ala	Tyr	Asn	Gln	Lys
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Val	Asp	Leu	Phe	Ser	Leu	Gly	Ile	Ile	Phe	Glu	Met	Ser	Tyr	His	
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Pro	Met	Val	Thr	Ala	Ser	Glu	Arg	Ile	Phe	Val	Leu	Asn	Gln	Leu	Arg
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Asp	Pro	Thr	Ser	Pro	Lys	Phe	Pro	Glu	Asp	Phe	Asp	Asp	Gly	Glu	His
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Ala	Lys	Gln	Lys	Ser	Val	Ile	Ser	Trp	Leu	Leu	Asn	His	Asp	Pro	Ala
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Lys	Arg	Pro	Thr	Ala	Thr	Glu	Leu	Leu	Lys	Ser	Glu	Leu	Leu	Pro	Pro
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Pro	Gln	Met	Glu	Glu	Ser	Glu	Leu	His	Glu	Val	Leu	His	His	Thr	Leu
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Thr	Asn	Val	Asp	Gly	Lys	Ala	Tyr	Arg	Thr	Met	Met	Ala	Gln	Ile	Phe
					180			185						190	
Ser	Gln	Arg	Ile	Ser	Pro	Ala	Ile	Asp	Tyr	Thr	Tyr	Asp	Ser	Asp	Ile
					195			200						205	
Leu	Lys	Gly	Asn	Phe	Ser	Ile	Arg	Thr	Ala	Lys	Met	Gln	Gln	His	Val
					210			215						220	
Cys	Glu	Thr	Ile	Ile	Arg	Ile	Phe	Lys	Arg	His	Gly	Ala	Val	Gln	Leu
					225						235			240	
Cys	Thr	Pro	Leu	Leu	Leu	Pro	Arg	Asn	Arg	Gln	Ile	Tyr	Glu	His	Asn
					245						250			255	
Glu	Ala	Ala	Leu	Phe	Met	Asp	His	Ser	Gly	Met	Leu	Val	Met	Leu	Pro
					260						265			270	
Phe	Asp	Leu	Arg	Ile	Pro	Phe	Ala	Arg	Tyr	Val	Ala	Arg	Asn	Asn	Ile
					275			280						285	
Leu	Asn	Leu	Lys	Arg	Tyr	Cys	Ile	Glu	Arg	Val	Phe	Arg	Pro	Arg	Lys
					290						300				
Leu	Asp	Arg	Phe	His	Pro	Lys	Glu	Leu	Leu	Glu	Cys	Ala	Phe	Asp	Ile
					305						315			320	

Val Thr Ser Thr Thr Asn Ser Phe Leu Pro Thr Ala Glu Ile Ile Tyr  
 325 330 335  
 Thr Ile Tyr Glu Ile Ile Gln Glu Phe Pro Ala Leu Gln Glu Arg Asn  
 340 345 350  
 Tyr Ser Ile Tyr Leu Asn His Thr Met Leu Leu Lys Ala Ile Leu Leu  
 355 360 365  
 His Cys Gly Ile Pro Glu Asp Lys Leu Ser Gln Val Tyr Ile Ile Leu  
 370 375 380  
 Tyr Asp Ala Val Thr Glu Lys Leu Thr Arg Arg Glu Val Glu Ala Lys  
 385 390 395 400  
 Phe Cys Asn Leu Ser Leu Ser Ser Asn Ser Leu Cys Arg Leu Tyr Lys  
 405 410 415  
 Phe Ile Glu Gln Lys Gly Asp Leu Gln Asp Leu Met Pro Thr Ile Asn  
 420 425 430  
 Ser Leu Ile Lys Gln Lys Thr Gly Ile Ala Gln Leu Val Lys Tyr Gly  
 435 440 445  
 Leu Lys Asp Leu Glu Glu Val Val Gly Leu Leu Lys Lys Leu Gly Ile  
 450 455 460  
 Lys Leu Gln Val Leu Ile Asn Leu Gly Leu Val Tyr Lys Val Gln Gln  
 465 470 475 480  
 His Asn Gly Ile Ile Phe Gln Phe Val Ala Phe Ile Lys Arg Arg Gln  
 485 490 495  
 Arg Ala Val Pro Glu Ile Leu Ala Ala Gly Gly Arg Tyr Asp Leu Leu  
 500 505 510  
 Ile Pro Gln Phe Arg Gly Pro Gln Ala Leu Gly Pro Val Pro Thr Ala  
 515 520 525  
 Ile Gly Val Ser Ile Ala Ile Asp Lys Ile Ser Ala Ala Val Leu Asn  
 530 535 540  
 Met Glu Glu Ser Val Thr Ile Ser Ser Cys Asp Leu Leu Val Val Ser  
 545 550 555 560  
 Val Gly Gln Met Ser Met Ser Arg Ala Ile Asn Leu Thr Gln Lys Leu  
 565 570 575  
 Trp Thr Ala Gly Ile Thr Ala Glu Ile Met Tyr Asp Trp Ser Gln Ser  
 580 585 590  
 Gln Glu Glu Leu Gln Glu Tyr Cys Arg His His Glu Ile Thr Tyr Val  
 595 600 605  
 Ala Leu Val Ser Asp Lys Glu Gly Ser His Val Lys Val Lys Ser Phe  
 610 615 620

Glu Lys Glu Arg Gln Thr Glu Lys Arg Val Leu Glu Thr Glu Leu Val  
625 630 635 640

Asp His Val Leu Gln Lys Leu Arg Thr Lys Val Thr Asp Glu Arg Asn  
645 650 655

Gly Arg Glu Ala Ser Asp Asn Leu Ala Val Gln Asn Leu Lys Gly Ser  
660 665 670

Phe Ser Asn Ala Ser Gly Leu Phe Glu Ile His Gly Ala Thr Val Val  
675 680 685

Pro Ile Val Ser Val Leu Ala Pro Glu Lys Leu Ser Ala Ser Thr Arg  
690 695 700

Arg Arg Tyr Glu Thr Gln Val Gln Thr Arg Leu Gln Thr Ser Leu Ala  
705 710 715 720

Asn Leu His Gln Lys Ser Ser Glu Ile Glu Ile Leu Ala Val Asp Leu  
725 730 735

Pro Lys Glu Thr Ile Leu Gln Phe Leu Ser Leu Glu Trp Asp Ala Asp  
740 745 750

Glu Gln Ala Phe Asn Thr Thr Val Lys Gln Leu Leu Ser Arg Leu Pro  
755 760 765

Lys Gln Arg Tyr Leu Lys Leu Val Cys Asp Glu Ile Tyr Asn Ile Lys  
770 775 780

Val Glu Lys Lys Val Ser Val Leu Phe Leu Tyr Ser Tyr Arg Asp Asp  
785 790 795 800

Tyr Tyr Arg Ile Leu Phe  
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<210> 20

<211> 530

<212> PRT

<213> Homo sapiens

<400> 20

Met Glu Tyr Ala Ser Lys Gly Glu Leu Tyr Asp Tyr Ile Ser Glu Arg  
1 5 10 15

Arg Arg Leu Ser Glu Arg Glu Thr Arg His Phe Phe Arg Gln Ile Val  
20 25 30

Ser Ala Val His Tyr Cys His Lys Asn Gly Val Val His Arg Asp Leu  
35 40 45

Lys Leu Glu Asn Ile Leu Leu Asp Asp Asn Cys Asn Ile Lys Ile Ala  
50 55 60

Asp Phe Gly Leu Ser Asn Leu Tyr Gln Lys Asp Lys Phe Leu Gln Thr  
65 70 75 80

Phe	Cys	Gly	Ser	Pro	Leu	Tyr	Ala	Ser	Pro	Glu	Ile	Val	Asn	Gly	Arg	
				85					90					95		
Pro	Tyr	Arg	Gly	Pro	Glu	Val	Asp	Ser	Trp	Ala	Leu	Gly	Val	Leu	Leu	
				100					105					110		
Tyr	Thr	Leu	Val	Tyr	Gly	Thr	Met	Pro	Phe	Asp	Gly	Phe	Asp	His	Lys	
				115					120					125		
Asn	Leu	Ile	Arg	Gln	Ile	Ser	Ser	Gly	Glu	Tyr	Arg	Glu	Pro	Thr	Gln	
				130					135					140		
Pro	Ser	Asp	Ala	Arg	Gly	Leu	Ile	Arg	Trp	Met	Leu	Met	Val	Asn	Pro	
				145					150					155		
Asp	Arg	Arg	Ala	Thr	Ile	Glu	Asp	Ile	Ala	Asn	His	Trp	Trp	Val	Asn	
				165					170					175		
Trp	Gly	Tyr	Lys	Ser	Ser	Val	Cys	Asp	Cys	Asp	Ala	Leu	His	Asp	Ser	
				180					185					190		
Glu	Ser	Pro	Leu	Leu	Ala	Arg	Ile	Asp	Trp	His	His	Arg	Ser	Thr		
				195					200					205		
Gly	Leu	Gln	Ala	Asp	Thr	Glu	Ala	Lys	Met	Lys	Gly	Leu	Ala	Lys	Pro	
				210					215					220		
Thr	Thr	Ser	Glu	Val	Met	Leu	Glu	Arg	Gln	Arg	Ser	Leu	Lys	Lys	Ser	
				225					230					235		
Lys	Lys	Glu	Asn	Asp	Phe	Ala	Gln	Ser	Gly	Gln	Asp	Ala	Val	Pro	Glu	
				245					250					255		
Ser	Pro	Ser	Lys	Leu	Ser	Ser	Lys	Arg	Pro	Lys	Gly	Ile	Leu	Lys	Lys	
				260					265					270		
Arg	Ser	Asn	Ser	Glu	His	Arg	Ser	His	Ser	Thr	Gly	Phe	Ile	Glu	Gly	
				275					280					285		
Val	Val	Gly	Pro	Ala	Leu	Pro	Ser	Thr	Phe	Lys	Met	Glu	Gln	Asp	Leu	
				290					295					300		
Cys	Arg	Thr	Gly	Val	Leu	Leu	Pro	Ser	Ser	Pro	Glu	Ala	Glu	Val	Pro	
				305					310					315		
Gly	Lys	Leu	Ser	Pro	Lys	Gln	Ser	Ala	Thr	Met	Pro	Lys	Lys	Gly	Ile	
				325					330					335		
Leu	Lys	Lys	Thr	Gln	Gln	Arg	Glu	Ser	Gly	Tyr	Tyr	Ser	Ser	Pro	Glu	
				340					345					350		
Arg	Ser	Glu	Ser	Ser	Glu	Leu	Leu	Asp	Ser	Asn	Asp	Val	Met	Gly	Ser	
				355					360					365		
Ser	Ile	Pro	Ser	Pro	Ser	Pro	Pro	Asp	Pro	Ala	Arg	Val	Thr	Ser	His	
				370					375					380		
Ser	Leu	Ser	Cys	Arg	Arg	Lys	Gly	Ile	Leu	Lys	His	Ser	Ser	Lys	Tyr	

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385              390              395              400
Ser Ala Gly Thr Met Asp Pro Ala Leu Val Ser Arg Glu Met Pro Thr
      405              410              415
Leu Glu Ser Leu Ser Glu Pro Gly Val Pro Ala Glu Gly Leu Ser Arg
      420              425              430
Ser Tyr Ser Arg Pro Ser Ser Val Ile Ser Asp Asp Ser Val Leu Ser
      435              440              445
Ser Asp Ser Phe Asp Leu Leu Asp Leu Gln Glu Asn Arg Pro Ala Arg
      450              455              460
Gln Arg Ile Arg Ser Cys Val Ser Ala Glu Asn Phe Leu Gln Ile Gln
      465              470              475              480
Asp Phe Glu Gly Leu Gln Asn Arg Pro Arg Pro Gln Tyr Leu Lys Arg
      485              490              495
Tyr Arg Asn Arg Leu Ala Asp Ser Ser Phe Ser Leu Leu Thr Asp Met
      500              505              510
Asp Asp Val Thr Gln Val Tyr Lys Gln Ala Leu Glu Ile Cys Ser Lys
      515              520              525
Leu Asn
      530

<210> 21
<211> 728
<212> PRT
<213> Homo sapiens

<400> 21
Met Leu Arg His Leu Arg Ala Thr Asp Ala Met Lys Asn Phe Ser Glu
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Phe Arg Gln Glu Ala Ser Met Leu His Ala Leu Gln His Pro Cys Ile
      20              25              30
Val Ala Leu Ile Gly Ile Ser Ile His Pro Leu Cys Phe Ala Leu Glu
      35              40              45
Leu Ala Pro Leu Ser Ser Leu Asn Thr Val Leu Ser Glu Asn Ala Arg
      50              55              60
Asp Ser Ser Phe Ile Pro Leu Gly His Met Leu Thr Gln Lys Ile Ala
      65              70              75              80
Tyr Gln Ile Ala Ser Gly Leu Ala Tyr Leu His Lys Lys Asn Ile Ile
      85              90              95
Phe Cys Asp Leu Lys Ser Asp Asn Ile Leu Val Trp Ser Leu Asp Val
      100              105              110
Lys Glu His Ile Asn Ile Lys Leu Ser Asp Tyr Gly Ile Ser Arg Gln

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115					120					125						
Ser	Phe	His	Glu	Gly	Ala	Leu	Gly	Val	Glu	Gly	Thr	Pro	Gly	Tyr	Gln	
130					135					140						
Ala	Pro	Glu	Ile	Arg	Pro	Arg	Ile	Val	Tyr	Asp	Glu	Lys	Val	Asp	Met	
145					150					155					160	
Phe	Ser	Tyr	Gly	Met	Val	Leu	Tyr	Glu	Leu	Leu	Ser	Gly	Gln	Arg	Pro	
165					170					175						
Ala	Leu	Gly	His	His	Gln	Leu	Gln	Ile	Ala	Lys	Lys	Leu	Ser	Lys	Gly	
180					185					190						
Ile	Arg	Pro	Val	Leu	Gly	Gln	Pro	Glu	Glu	Val	Gln	Phe	Arg	Arg	Leu	
195					200					205						
Gln	Ala	Leu	Met	Met	Glu	Cys	Trp	Asp	Thr	Lys	Pro	Glu	Lys	Arg	Pro	
210					215					220						
Leu	Ala	Leu	Ser	Val	Val	Ser	Gln	Met	Lys	Asp	Pro	Thr	Phe	Ala	Thr	
225					230					235					240	
Phe	Met	Tyr	Glu	Leu	Cys	Cys	Gly	Lys	Gln	Thr	Ala	Phe	Phe	Ser	Ser	
245					250					255						
Gln	Gly	Gln	Glu	Tyr	Thr	Val	Val	Phe	Trp	Asp	Gly	Lys	Glu	Glu	Ser	
260					265					270						
Arg	Asn	Tyr	Thr	Val	Val	Asn	Thr	Glu	Lys	Gly	Leu	Met	Glu	Val	Gln	
275					280					285						
Arg	Met	Cys	Cys	Pro	Gly	Met	Lys	Val	Ser	Cys	Gln	Leu	Gln	Val	Gln	
290					295					300						
Arg	Ser	Leu	Trp	Thr	Ala	Thr	Glu	Asp	Gln	Lys	Ile	Tyr	Ile	Tyr	Thr	
305					310					315					320	
Leu	Lys	Gly	Met	Cys	Pro	Leu	Asn	Thr	Pro	Gln	Gln	Ala	Leu	Asp	Thr	
325					330					335						
Pro	Ala	Val	Val	Thr	Cys	Phe	Leu	Ala	Val	Pro	Val	Ile	Lys	Lys	Asn	
340					345					350						
Ser	Tyr	Leu	Val	Leu	Ala	Gly	Leu	Ala	Asp	Gly	Leu	Val	Ala	Val	Phe	
355					360					365						
Pro	Val	Val	Arg	Gly	Thr	Pro	Lys	Asp	Ser	Cys	Ser	Tyr	Leu	Cys	Ser	
370					375					380						
His	Thr	Ala	Asn	Arg	Ser	Lys	Phe	Ser	Ile	Ala	Asp	Glu	Asp	Ala	Arg	
385					390					395					400	
Gln	Asn	Pro	Tyr	Pro	Val	Lys	Ala	Met	Glu	Val	Val	Asn	Ser	Gly	Ser	
405					410					415						
Glu	Val	Trp	Tyr	Ser	Asn	Gly	Pro	Gly	Leu	Leu	Val	Ile	Asp	Cys	Ala	
420					425					430						



Ser Leu Glu Ile Cys Arg Arg Leu Glu Pro Tyr Met Ala Pro Ser Met  
 435 440 445  
 Val Thr Ser Val Val Cys Ser Ser Glu Gly Arg Gly Glu Glu Val Val  
 450 455 460  
 Trp Cys Leu Asp Asp Lys Ala Asn Ser Leu Val Met Tyr His Ser Thr  
 465 470 475 480  
 Thr Tyr Gln Leu Cys Ala Arg Tyr Phe Cys Gly Val Pro Ser Pro Leu  
 485 490 495  
 Arg Asp Met Phe Pro Val Arg Pro Leu Asp Thr Glu Pro Pro Ala Ala  
 500 505 510  
 Ser His Thr Ala Asn Pro Lys Val Pro Glu Gly Asp Ser Ile Ala Asp  
 515 520 525  
 Val Ser Ile Met Tyr Ser Glu Glu Leu Gly Thr Gln Ile Leu Ile His  
 530 535 540  
 Gln Glu Ser Leu Thr Asp Tyr Cys Ser Met Ser Ser Tyr Ser Ser Ser  
 545 550 555 560  
 Pro Pro Arg Gln Ala Ala Arg Ser Pro Ser Ser Leu Pro Ser Ser Pro  
 565 570 575  
 Ala Ser Ser Ser Ser Val Pro Phe Ser Thr Asp Cys Glu Asp Ser Asp  
 580 585 590  
 Met Leu His Thr Pro Gly Ala Ala Ser Asp Arg Ser Glu His Asp Leu  
 595 600 605  
 Thr Pro Met Asp Gly Glu Thr Phe Ser Gln His Leu Gln Ala Val Lys  
 610 615 620  
 Ile Leu Ala Val Arg Asp Leu Ile Trp Val Pro Arg Arg Gly Gly Asp  
 625 630 635 640  
 Val Ile Val Ile Gly Leu Glu Lys Asp Ser Glu Ala Gln Arg Gly Arg  
 645 650 655  
 Val Ile Ala Val Leu Lys Ala Arg Glu Leu Thr Pro His Gly Val Leu  
 660 665 670  
 Val Asp Ala Ala Val Val Ala Lys Asp Thr Val Val Cys Thr Phe Glu  
 675 680 685  
 Asn Glu Asn Thr Glu Trp Cys Leu Ala Val Trp Arg Gly Trp Gly Ala  
 690 695 700  
 Arg Glu Phe Asp Ile Phe Tyr Gln Ser Tyr Glu Glu Leu Gly Arg Leu  
 705 710 715 720  
 Glu Ala Cys Thr Arg Lys Arg Arg  
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<210> 22  
 <211> 253  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
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 Asp Gly Val Val His His His Gly Leu Phe Gln Asp Arg Thr Cys Glu  
 20 25 30  
 Ile Val Glu Asp Thr Glu Ser Ser Arg Met Val Lys Lys Met Lys Lys  
 35 40 45  
 Arg Ile Cys Leu Val Leu Asp Cys Leu Cys Ala His Asp Phe Ser Asp  
 50 55 60  
 Lys Thr Ala Asp Leu Ile Asn Leu Gln His Tyr Val Ile Lys Glu Lys  
 65 70 75 80  
 Arg Leu Ser Glu Arg Glu Thr Val Val Ile Phe Tyr Asp Val Val Arg  
 85 90 95  
 Val Val Glu Ala Leu His Gln Lys Asn Ile Val His Arg Asp Leu Lys  
 100 105 110  
 Leu Gly Asn Met Val Leu Asn Lys Arg Thr His Arg Ile Thr Ile Thr  
 115 120 125  
 Asn Phe Cys Leu Gly Lys His Leu Val Ser Glu Gly Asp Leu Leu Lys  
 130 135 140  
 Asp Gln Arg Gly Ser Pro Ala Tyr Ile Ser Pro Asp Gly Ser Ala Ala  
 145 150 155 160  
 Gly Arg Thr Val Ala Ser Pro Val Thr Cys Gly Pro Trp Ala Trp Cys  
 165 170 175  
 Ser Ser Pro Cys Cys Met Ala Ser Ser Pro Ser Thr Thr Ala Ser Arg  
 180 185 190  
 Arg Ser Ser Ser Ala Arg Ser Arg Leu Pro Ser Ile Pro Phe Leu Arg  
 195 200 205  
 Met Asp Gly Phe Leu Arg Thr Pro Cys Val Ser Ser Gly Ser Cys Trp  
 210 215 220  
 Ser Leu Thr Pro Ser Ser Ala Trp Pro Pro Thr Ser Trp Arg Pro  
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 Ser Val Pro Ser Leu His His Gly Ser Pro Cys His Leu  
 245 250

<210> 23  
 <211> 131

<212> PRT  
 <213> Homo sapiens

<400> 23  
 Met Ala Gly Gln Pro Gly His Met Pro His Gly Gly Ser Ser Asn Asn  
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 Leu Cys His Thr Leu Gly Pro Val His Pro Pro Asp Pro Gln Arg His  
 20 25 30  
 Pro Asn Thr Leu Ser Phe Arg Cys Ser Leu Ala Asp Phe Gln Ile Glu  
 35 40 45  
 Lys Lys Ile Gly Arg Gly Gln Phe Ser Glu Val Tyr Lys Ala Thr Cys  
 50 55 60  
 Leu Leu Asp Arg Lys Thr Val Ala Leu Lys Lys Val Gln Ile Phe Glu  
 65 70 75 80  
 Met Met Asp Ala Lys Ala Arg Gln Asp Cys Val Lys Glu Ile Gly Leu  
 85 90 95  
 Leu Lys Gln Leu Asn His Pro Asn Ile Ile Lys Tyr Leu Asp Ser Phe  
 100 105 110  
 Thr Glu Thr Ser Ser Leu Pro Thr Cys Ser Ser Gln Pro Ala Pro Leu  
 115 120 125  
 Cys Leu Thr  
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<210> 24  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 24  
 Met Val Thr Leu Gly Ala Pro Pro Tyr Pro Glu Val Pro Pro Thr Ser  
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 Ile Leu Glu His Leu Gln Arg Arg Lys Ile Met Lys Arg Pro Ser Ser  
 20 25 30  
 Cys Thr His Thr Met Tyr Ser Ile Met Lys Ser Cys Trp Arg Trp Arg  
 35 40 45  
 Glu Ala Asp Arg Pro Ser Pro Arg Glu Leu Arg Leu Arg Leu Glu Ala  
 50 55 60  
 Ala Ile Lys Thr Ala Asp Asp Glu Ala Val Leu Gln Val Pro Glu Leu  
 65 70 75 80  
 Val Val Pro Glu Leu Tyr Ala Ala Val Ala Gly Ile Arg Val Glu Ser  
 85 90 95  
 Leu Phe Tyr Asn Tyr Ser Met Leu  
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<210> 25  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 25  
 Met Thr Gln Glu Val Val Thr Gln Tyr Tyr Arg Ala Pro Glu Ile Leu  
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 Met Gly Ser Arg His Tyr Ser Asn Ala Ile Asp Ile Trp Ser Val Gly  
                   20                          25                          30  
 Cys Ile Phe Ala Glu Leu Leu Gly Arg Arg Ile Leu Phe Gln Ala Gln  
                   35                          40                          45  
 Ser Pro Ile Gln Gln Leu Asp Leu Ile Thr Asp Leu Leu Gly Thr Pro  
                   50                          55                          60  
 Ser Leu Glu Ala Met Arg Thr Ala Cys Glu Gly Ala Lys Ala His Ile  
                   65                          70                          75                          80  
 Leu Arg Gly Pro His Lys Gln Val Arg Gly Gly Gly Asn Leu Phe Leu  
                           85                          90                          95  
 Val Thr Ile Cys Leu Gly Lys Ile Ser Leu Pro Ile Glu  
                   100                          105

<210> 26  
 <211> 242  
 <212> PRT  
 <213> Homo sapiens

<400> 26  
 Gly Thr Arg Asp Lys Lys Leu Trp Arg Thr Phe Phe Ile Ser Pro Ala  
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 Asn Asn Ile Cys Phe Tyr Gly Glu Cys Ser Tyr Tyr Cys Ser Thr Glu  
                   20                          25                          30  
 His Ala Leu Cys Gly Lys Pro Asp Gln Ile Glu Gly Ser Leu Ala Ala  
                   35                          40                          45  
 Phe Leu Pro Asp Leu Ser Leu Ala Lys Arg Lys Thr Trp Arg Asn Pro  
                   50                          55                          60  
 Trp Arg Arg Ser Tyr His Lys Arg Lys Lys Ala Glu Trp Glu Val Asp  
           65                          70                          75                          80  
 Pro Asp Tyr Cys Glu Glu Val Lys Gln Thr Pro Pro Tyr Asp Ser Ser  
                   85                          90                          95  
 His Arg Ile Leu Asp Val Met Asp Met Thr Ile Phe Asp Phe Leu Met  
                   100                          105                          110  
 Gly Asn Met Asp Arg His His Tyr Glu Thr Phe Glu Lys Phe Gly Asn

115                      120                      125  
 Glu Thr Phe Ile Ile His Leu Asp Asn Gly Arg Gly Phe Gly Lys Tyr  
     130                      135                      140  
 Ser His Asp Glu Leu Ser Ile Leu Val Pro Leu Gln Gln Cys Cys Arg  
     145                      150                      155                      160  
 Ile Arg Lys Ser Thr Tyr Leu Arg Leu Gln Leu Leu Ala Lys Glu Glu  
                                  165                      170                      175  
 Tyr Lys Leu Ser Leu Leu Met Ala Glu Ser Leu Arg Gly Asp Gln Val  
                                  180                      185                      190  
 Ala Pro Val Leu Tyr Gln Pro His Leu Glu Ala Leu Asp Arg Arg Leu  
                                  195                      200                      205  
 Arg Val Val Leu Lys Ala Val Arg Asp Cys Val Glu Arg Asp Gly Leu  
                                  210                      215                      220  
 His Ser Val Val Asp Asp Asp Leu Asp Thr Glu His Arg Ala Ala Ser  
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 Ala Arg  
  
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 <211> 70  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 27  
 Met Tyr Asn Ser Val Lys Gly Ser Cys Ser Glu Pro Val Ser Phe Thr  
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 Thr His Ser Cys Ala Pro Glu Cys Pro Phe Pro Pro Lys Leu Ala His  
                                  20                      25                      30  
 Arg Ser Lys Ser Ser Leu Thr Leu Gln Trp Lys Ala Pro Ile Asp Asn  
                                  35                      40                      45  
 Gly Ser Lys Ile Thr Asn Tyr Leu Leu Glu Trp Asp Glu Val Ser Leu  
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 Phe Ser Tyr Ser Pro Ile  
     65                      70  
  
 <210> 28  
 <211> 15  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 28  
 Lys Ile Lys Thr Leu Gly Ile Gly Ala Phe Gly Glu Val Cys Leu  
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<210> 29  
 <211> 39  
 <212> PRT  
 <213> Homo sapiens

<400> 29  
 Thr Ser Ser Ala Gly Asp Ser Glu Ala Thr Asp Arg Pro Arg Pro Gly  
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 Asp Leu Cys Pro Pro Ser Lys Asp Gly Asp Ala Ser Gly Pro Arg Ala  
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 Thr Asn Asp Leu Val Leu Arg  
 35

<210> 30  
 <211> 38  
 <212> PRT  
 <213> Homo sapiens

<400> 30  
 Val Ile Lys Ser Ala Ser Ala Thr Ala Leu Ser Val Met Ile Pro Ala  
 1 5 10 15  
 Val Asp Pro His Gly Ser Ser Pro Leu Ala Ser Pro Met Ser Pro Arg  
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 Ser Leu Ser Ser Asn Pro  
 35

<210> 31  
 <211> 30  
 <212> PRT  
 <213> Homo sapiens

<400> 31  
 Arg Ser Thr Pro Asp Ser Ala Tyr Leu Gly Ala Ser Ser Gln Ser Ser  
 1 5 10 15  
 Ser Pro Ala Ser Ser Thr Pro Asn Ser Pro Ala Ser Ser Ala  
 20 25 30

<210> 32  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<400> 32  
 Gly Thr Ser Ile Leu Gly Pro Arg Leu Gly Asn Ser Pro Val Pro Ser  
 1 5 10 15  
 Ile Val Gln Cys Leu Ala Arg Lys Asp Gly Thr Asp Asp Phe Tyr Gln  
 20 25 30

His